

Phe	Gln	Thr	Glu	Asp	Glu	Leu	Phe	Ser	His	Leu	His	Pro	Leu	Leu	Gly
35															
							40							45	
Asp	Ala	Met	Arg	Glu	Ile	Lys	Gly	Ile	Gly	Val	Ala	Ser	Val	Val	Pro
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							55							60	
Thr	Gln	Asn	Thr	Val	Ile	Glu	Arg	Phe	Ser	Gln	Lys	Tyr	Phe	His	Ile
65															
							70							75	
Ser	Pro	Ile	Trp	Val	Lys	Ala	Lys	Asn	Gly	Cys	Val	Lys	Trp	Asn	Val
							85							90	
Lys	Asn	Pro	Ser	Glu	Val	Gly	Ala	Asp	Arg	Val	Ala	Asn	Val	Val	Ala
							100							105	
Phe	Val	Lys	Glu	Tyr	Gly	Lys	Asn	Gly	Ile	Ile	Asp	Met	Gly	Thr	
							115							120	
														125	
Ala	Thr	Thr	Val	Asp	Leu	Val	Val	Asn	Gly	Ser	Tyr	Glu	Gly	Gly	Ala
							130							135	
														140	
Ile	Leu	Pro	Gly	Phe	Phe	Met	Met	Val	His	Ser	Leu	Phe	Arg	Gly	Thr
							145							150	
														155	
Ala	Lys	Leu	Pro	Leu	Val	Glu	Val	Lys	Pro	Ala	Asp	Phe	Val	Val	Gly
							165							170	
Lys	Asp	Thr	Glu	Glu	Asn	Ile	Arg	Leu	Gly	Val	Val	Asn	Gly	Ser	Val
							180							185	
														190	
Tyr	Ala	Leu	Glu	Gly	Ile	Ile	Gly	Arg	Ile	Lys	Glu	Val	Tyr	Gly	Asp
							195							200	
														205	
Leu	Pro	Val	Val	Leu	Thr	Gly	Gly	Gln	Ser	Lys	Ile	Val	Lys	Asp	Met
							210							215	
														220	
Ile	Lys	His	Glu	Ile	Phe	Asp	Glu	Asp	Leu	Thr	Ile	Lys	Gly	Val	Tyr
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														235	
														240	
His	Phe	Cys	Phe	Gly	Asp										
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<210> 13

<211> 273

<212> PRT

<213> Treponema pallidum

<400> 13

Met	Leu	Leu	Ile	Asp	Val	Gly	Asn	Ser	His	Val	Val	Phe	Gly	Ile	Gln
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Gly	Glu	Asn	Gly	Gly	Arg	Val	Cys	Val	Arg	Glu	Leu	Phe	Arg	Leu	Ala
							20						25		30

Pro	Asp	Ala	Arg	Lys	Thr	Gln	Asp	Glu	Tyr	Ser	Leu	Leu	Ile	His	Ala
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Leu	Cys	Glu	Arg	Ala	Gly	Val	Gly	Arg	Ala	Ser	Leu	Arg	Asp	Ala	Phe
							50						55		60

Ile	Ser	Ser	Val	Val	Pro	Val	Leu	Thr	Lys	Thr	Ile	Ala	Asp	Ala	Val
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Ala	Gln	Ile	Ser	Gly	Val	Gln	Pro	Val	Val	Phe	Gly	Pro	Trp	Ala	Tyr
					85				90					95	
Glu	His	Leu	Pro	Val	Arg	Ile	Pro	Glu	Pro	Val	Arg	Ala	Glu	Ile	Gly
					100				105				110		
Thr	Asp	Leu	Val	Ala	Asn	Ala	Val	Ala	Ala	Tyr	Val	His	Phe	Arg	Ser
					115				120			125			
Ala	Cys	Val	Val	Val	Asp	Cys	Gly	Thr	Ala	Leu	Thr	Phe	Thr	Ala	Val
					130				135			140			
Asp	Gly	Thr	Gly	Leu	Ile	Gln	Gly	Val	Ala	Ile	Ala	Pro	Gly	Leu	Arg
					145			150			155			160	
Thr	Ala	Val	Gln	Ser	Leu	His	Thr	Gly	Thr	Ala	Gln	Leu	Pro	Leu	Val
					165				170				175		
Pro	Leu	Ala	Leu	Pro	Asp	Ser	Val	Leu	Gly	Lys	Asp	Thr	Thr	His	Ala
					180				185				190		
Val	Gln	Ala	Gly	Val	Val	Arg	Gly	Thr	Leu	Phe	Val	Ile	Arg	Ala	Met
					195				200			205			
Ile	Ala	Gln	Cys	Gln	Lys	Glu	Leu	Gly	Cys	Arg	Cys	Ala	Ala	Val	Ile
					210			215			220				
Thr	Gly	Gly	Leu	Ser	Arg	Leu	Phe	Ser	Ser	Glu	Val	Asp	Phe	Pro	Pro
					225			230			235			240	
Ile	Asp	Ala	Gln	Leu	Thr	Leu	Ser	Gly	Leu	Ala	His	Ile	Ala	Arg	Leu
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<211> 262
<212> PRT
<213> *Borrelia burdorferi*

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Ser Ile Ala Phe Ala Leu Phe Lys Asp Asn Gln Val Asn Leu Phe Ile
20 25 30
Lys Met Lys Thr Asn Leu Met Leu Arg Tyr Asp Glu Val Tyr Ser Phe
35 40 45
Phe Glu Glu Asn Phe Asp Phe Asn Val Asn Lys Val Phe Ile Ser Ser
50 55 60

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Val Val Pro Ile Leu Asn Glu Thr Phe Lys Asn Val Ile Phe Ser Phe
 65 70 75 80

Phe Lys Ile Lys Pro Leu Phe Ile Gly Phe Asp Leu Asn Tyr Asp Leu
 85 90 95

Thr Phe Asn Pro Tyr Lys Ser Asp Lys Phe Leu Leu Gly Ser Asp Val
 100 105 110

Phe Ala Asn Leu Val Ala Ala Ile Glu Asn Tyr Ser Phe Glu Asn Val
 115 120 125

Leu Val Val Asp Leu Gly Thr Ala Cys Thr Ile Phe Ala Val Ser Arg
 130 135 140

Gln Asp Gly Ile Leu Gly Gly Ile Ile Asn Ser Gly Pro Leu Ile Asn
 145 150 155 160

Phe Asn Ser Leu Leu Asp Asn Ala Tyr Leu Ile Lys Lys Phe Pro Ile
 165 170 175

Ser Thr Pro Asn Asn Leu Leu Glu Arg Thr Thr Ser Gly Ser Val Asn
 180 185 190

Ser Gly Leu Phe Tyr Gln Tyr Lys Tyr Leu Ile Glu Gly Val Tyr Arg
 195 200 205

Asp Ile Lys Gln Met Tyr Lys Lys Phe Asn Leu Ile Ile Thr Gly
 210 215 220

Gly Asn Ala Asp Leu Ile Leu Ser Leu Ile Glu Ile Glu Phe Ile Phe
 225 230 235 240

Asn Ile His Leu Thr Val Glu Gly Val Arg Ile Leu Gly Asn Ser Ile
 245 250 255

Asp Phe Lys Phe Val Asn
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<210> 15

<211> 229

<212> PRT

<213> Aquifex aeolicus

<400> 15

Met Arg Phe Leu Thr Val Asp Val Gly Asn Ser Ser Val Asp Ile Ala
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 20 25 30

Glu Phe Leu Lys Glu Glu Phe Pro Lys Leu Lys Ala Leu Gly Ile Ser
 35 40 45

Val Lys Gln Ser Phe Ser Glu Lys Val Arg Gly Lys Ile Pro Lys Ile
 50 55 60

Lys Phe Leu Lys Lys Glu Asn Phe Pro Ile Gln Val Asp Tyr Lys Thr
 65 70 75 80